

Title (en)  
SUPERCONDUCTING MAGNET

Title (de)  
SUPRALEITENDER MAGNET

Title (fr)  
AIMANT SUPRACONDUCTEUR

Publication  
**EP 3622544 B1 20230118 (EN)**

Application  
**EP 18733323 A 20180509**

Priority  
• GB 201707392 A 20170509  
• GB 2018051242 W 20180509

Abstract (en)  
[origin: GB2558685A] A superconducting magnet for producing a part of a toroidal field in a device, the magnet comprises a set of conductors 31d, 32d and a set of joints 331-5, each of the joints 331-5 connecting two of the conductors, a first 31d and second conductor 32d to form a series of conductors corresponding to at least part of a winding of the magnet. The first 31d and second 32d conductors are different shapes. Each of the first conductors 31d passes through a midplane of the toroidal field at a smaller distance from an axis of rotation of the toroidal field than the second conductor 32d. Each of the joints 331-5 is positioned away from the midplane of the toroidal field and the joints 331-5 are positioned on alternating sides of the midplane. The superconducting magnet is used in a tokamak and in a method of constructing and operating said tokamak.

IPC 8 full level  
**H01F 6/06** (2006.01); **G21B 1/05** (2006.01); **H10N 60/81** (2023.01)

CPC (source: EP GB US)  
**G21B 1/057** (2013.01 - EP GB US); **G21B 1/11** (2013.01 - US); **H01F 6/00** (2013.01 - US); **H01F 6/06** (2013.01 - EP US);  
**H01F 6/065** (2013.01 - EP GB); **Y02E 30/10** (2013.01 - EP)

Cited by  
CN116072372A; EP4266332A1; WO2023203016A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**GB 201707392 D0 20170621**; **GB 2558685 A 20180718**; **GB 2558685 B 20190403**; **GB 2558685 B8 20190410**; EP 3622544 A1 20200318;  
EP 3622544 B1 20230118; JP 2020521317 A 20200716; JP 7222456 B2 20230215; US 11646138 B2 20230509; US 2020168349 A1 20200528;  
WO 2018206944 A1 20181115

DOCDB simple family (application)  
**GB 201707392 A 20170509**; EP 18733323 A 20180509; GB 2018051242 W 20180509; JP 2019562280 A 20180509;  
US 201816611840 A 20180509